



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,166	12/04/2001	Pavel I. Lazarev	A-71153/AJT	2857

7590 10/08/2003
FLEHR HOHBACH TEST ALBRITTON & HERBERT LLP
Suite 3400
Four Embarcadero Center
San Francisco, CA 94111-4187

EXAMINER

HON, SOW FUN

ART UNIT	PAPER NUMBER
----------	--------------

1772

DATE MAILED: 10/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/006,166

Applicant(s)

LAZAREV, PAVEL I.

Examiner

Sow-Fun Hon

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-51 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Russia on December 6, 2000. It is noted, however, that applicant has not filed a certified copy of the cited application as required by 35 U.S.C. 119(b).

Specification

2. The abstract of the disclosure is objected to because it is longer than 150 words. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 recites that the at least one electrode layer "simultaneously functions as at least two of the above listed layers is anisotropic". Is the electrode layer anisotropic or is the layer of liquid crystal material anisotropic, or both are anisotropic?

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 1772

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2, 4, 6, 8, 18, 20, 22, 24, 35, 37, 39, 49 are rejected under 35 U.S.C. 102(b) as being anticipated by Belyaev et al. (EP 0961138 A1).

Belyaev et al. has a liquid crystal information display (abstract) comprising a layer of liquid crystal material between panels of functional layers in which the number and parameters of the anisotropic layers in the display are coordinated (number and layer thicknesses selected) so as to provide the interference minimum of transmission for one linearly polarized light component and the interference maximum of transmission for the other orthogonal linearly polarized light component at at least one wavelength transmitted at the exit of the display (output of the polarizer) (column 7, lines 30-60). The anisotropic layer (column 8, lines 35-60) comprises an oriented (column 11, lines 40-60) film of organic dye where {Chromogene}(SO₃)_n is the dye K of Applicant which contains the SO₃⁻ ionogenic groups which provide its solubility in polar solvents in order to form a stable lyotropic liquid-crystal phase, (M)_n is the anti-ion M of Applicant and n is the number of anti-ions in the dye molecule (column 9, lines 45-60). Due to the liquid crystal nature of the organic dye, the film formed by the oriented liquid crystalline dye is crystalline.

The polarizer is an internal one since the anisotropic liquid crystal layers (polarizing coatings) are applied on the planarization layers (surface profile smoothening insulation films), and since they also align (orient) the nematic liquid crystal of layer 52 (column 38, lines 45-60), they simultaneously function as alignment layers and color filters (due to their anisotropically absorbing dye nature) (column 8, lines 35-60).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3, 5, 7, 9-17, 19, 21, 23, 25-34, 36, 38, 40-48, 50-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belyaev et al.

Belyaev et al. has been discussed above and teaches a liquid crystal information display comprising a layer of liquid crystal material between panels of functional layers in which the layer of liquid crystal material has parameters providing at least one interference maximum or minimum of transmission or reflection for at least one linearly polarized component of light at at least one wavelength reflected or transmitted at the exit of the display.

Since Belyaev et al. teaches that the number and parameters of the anisotropic layers in the display are coordinated (number and layer thicknesses selected) so as to provide the interference minimum of transmission for one linearly polarized light component and the interference maximum of transmission for the other orthogonal linearly polarized light component at at least one wavelength transmitted at the exit of the display (output of the polarizer) (column 7, lines 30-60), it would have been obvious to one of ordinary skill in the art to have coordinated the numbers and parameters of all layers in the display to provide the interference maximum and minimum of transmission at the exit of the display in order to obtain an optimized functional display. It follows then that since Belyaev et al. teaches that the

Art Unit: 1772


anisotropic liquid crystal layer is disposed on a transparent electrode (column 26, lines 40-45), it would have been mere routine optimization to have made the electrode layer anisotropic.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (703)308-3265. The examiner can normally be reached Monday to Friday from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (703)308-4251. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

SH
Sow-Fun Hon
09/29/03


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1/12

9/30/03